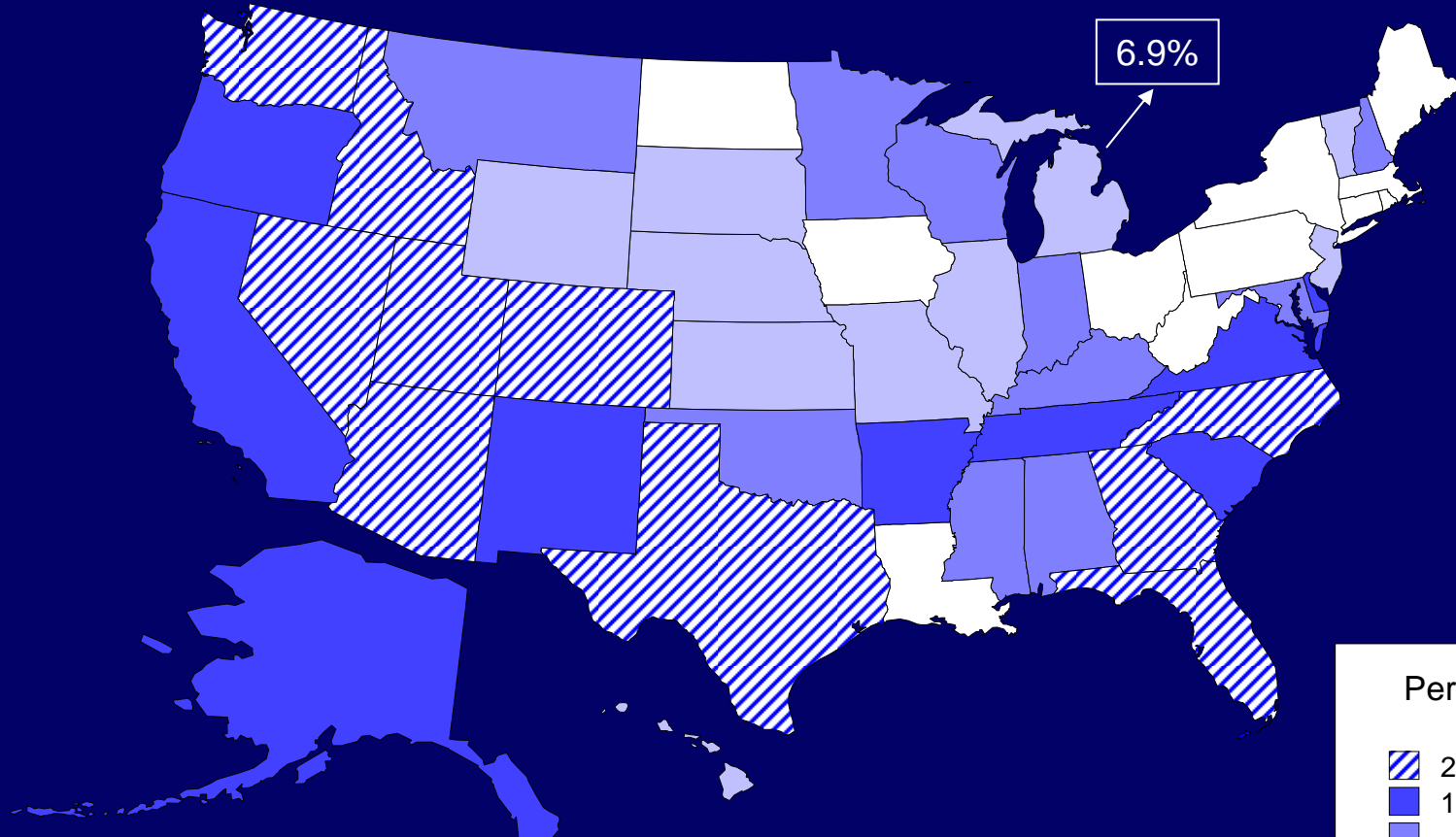
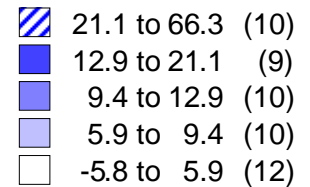


Percent Change in the U.S. Population, 1990-2000

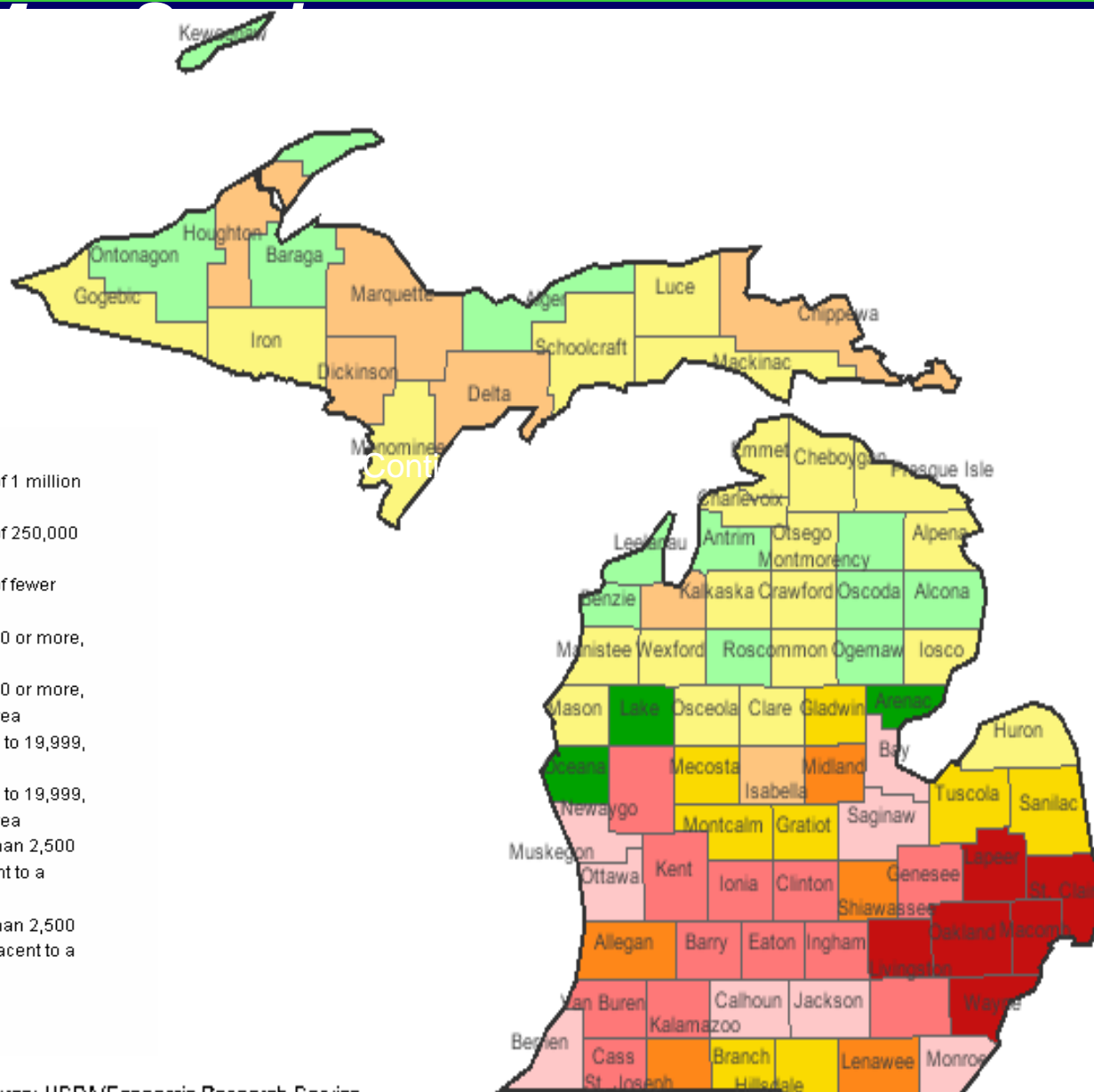


Percent Change



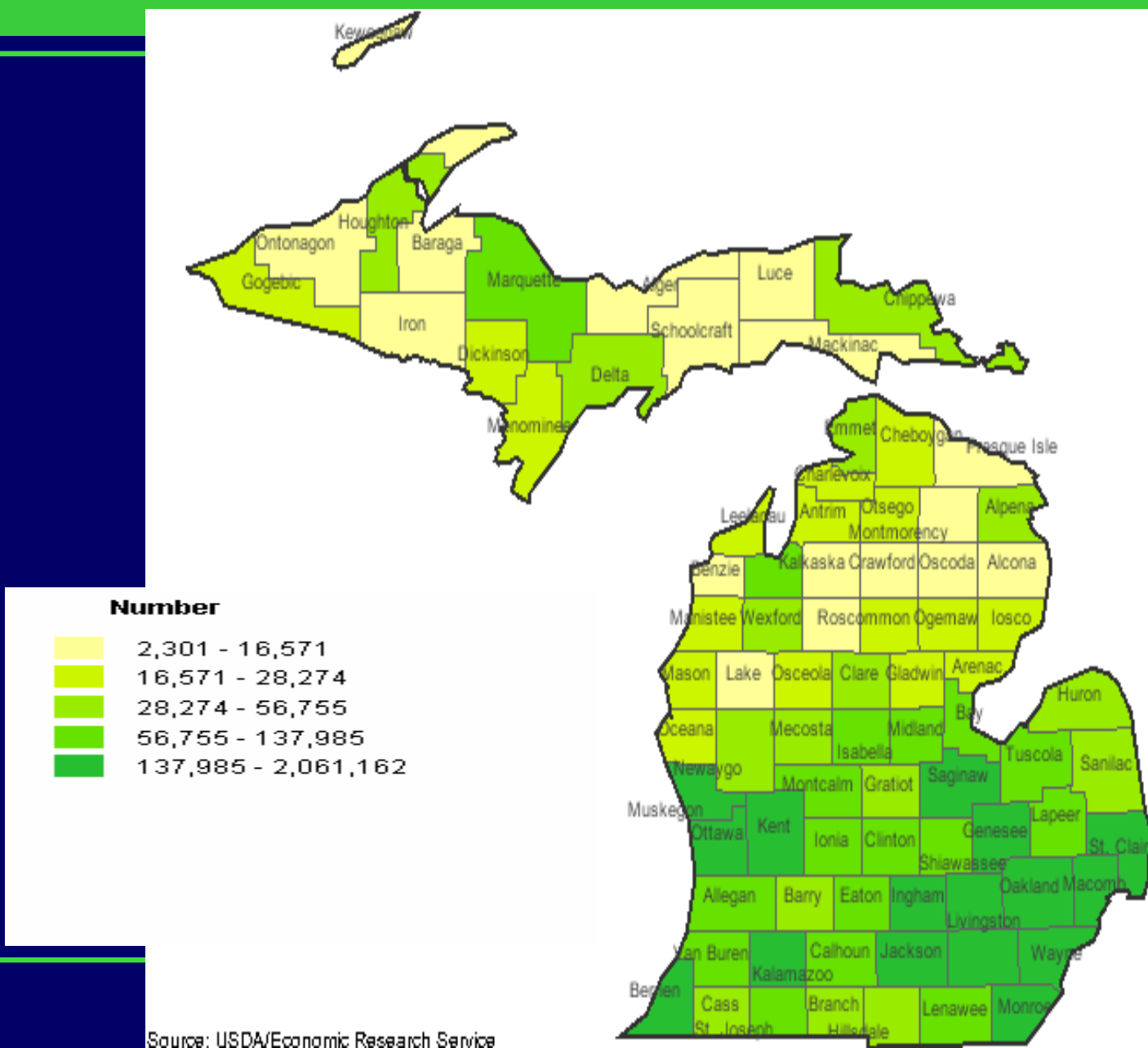
■ Rural-urban Continuum Code, 2003

ERS



Source: USDA/Economic Research Service

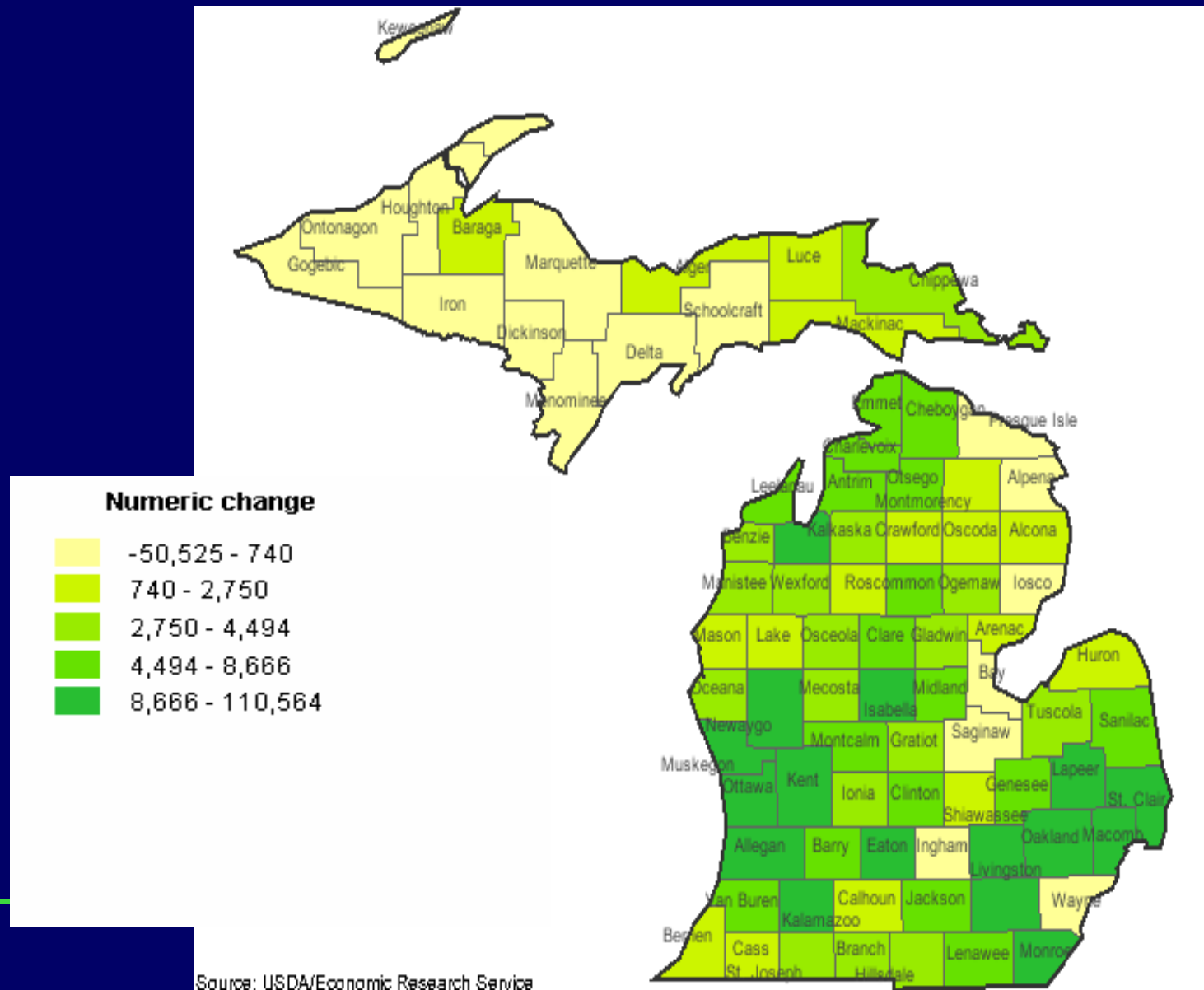
Base population for estimates - 2000



Source: USDA/Economic Research Service

■ Population Change 1990-2000 Service

ERS Map



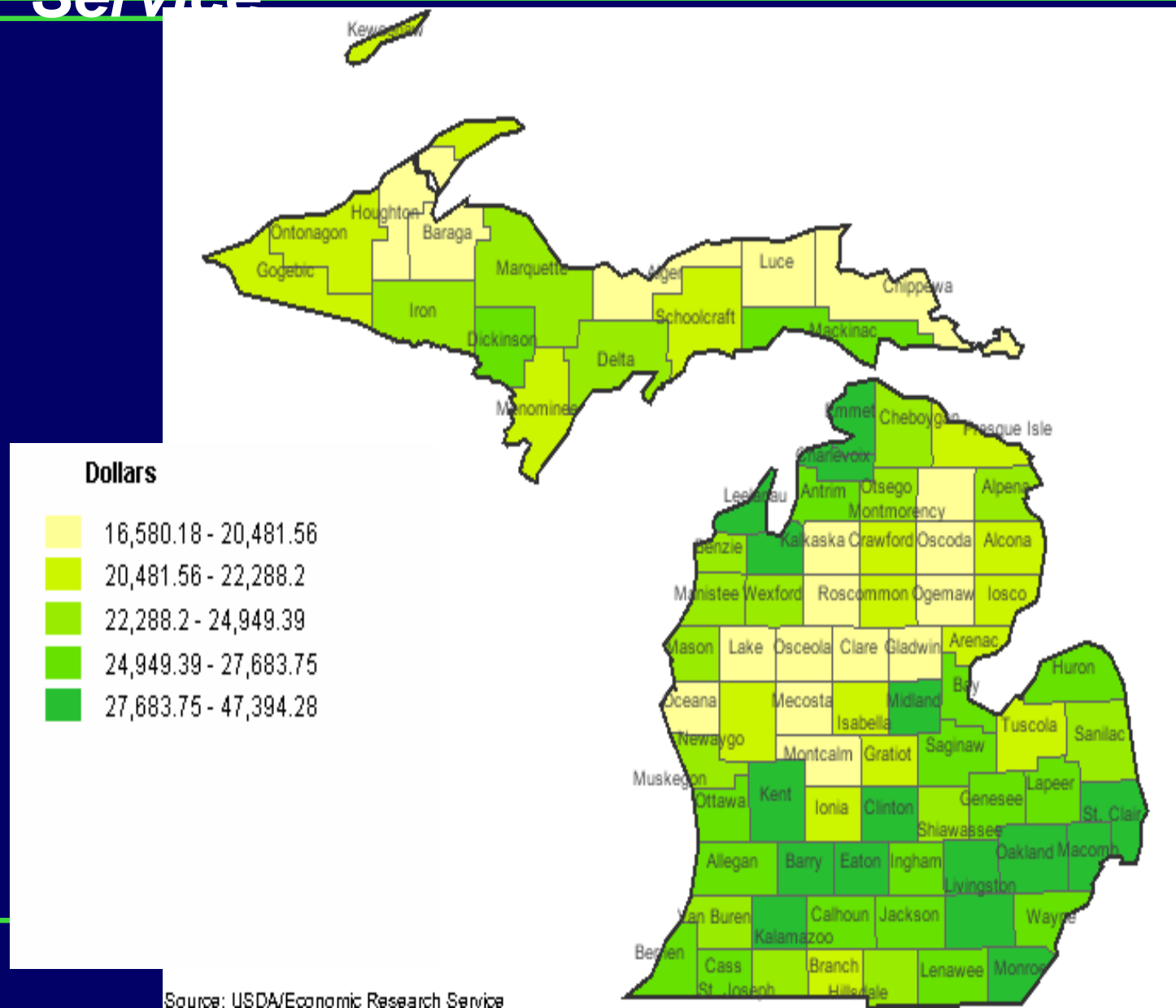
Source: USDA/Economic Research Service

ERS



■ Per Capita Income 2002 Service

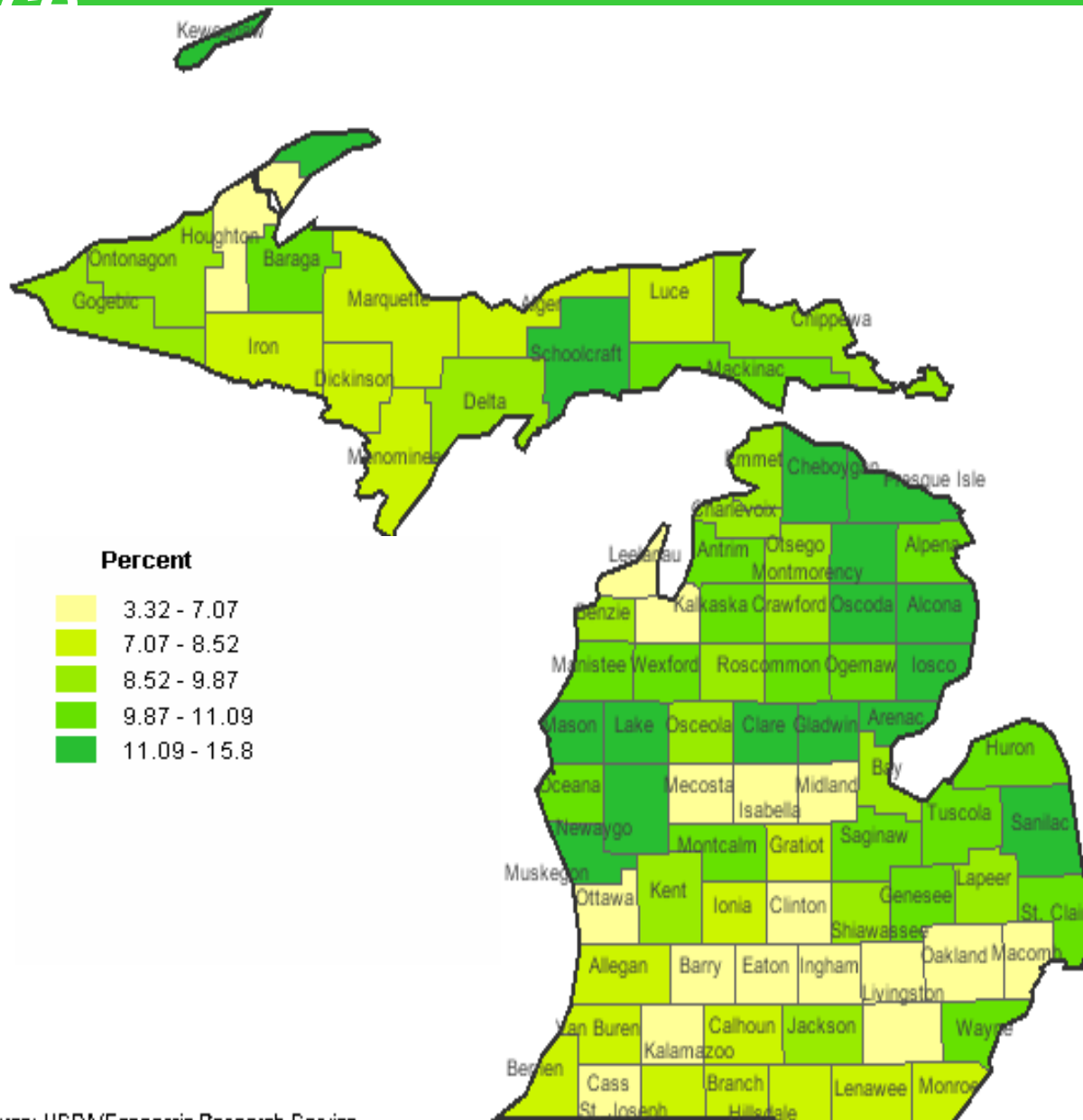
ERS Map



Source: USDA/Economic Research Service

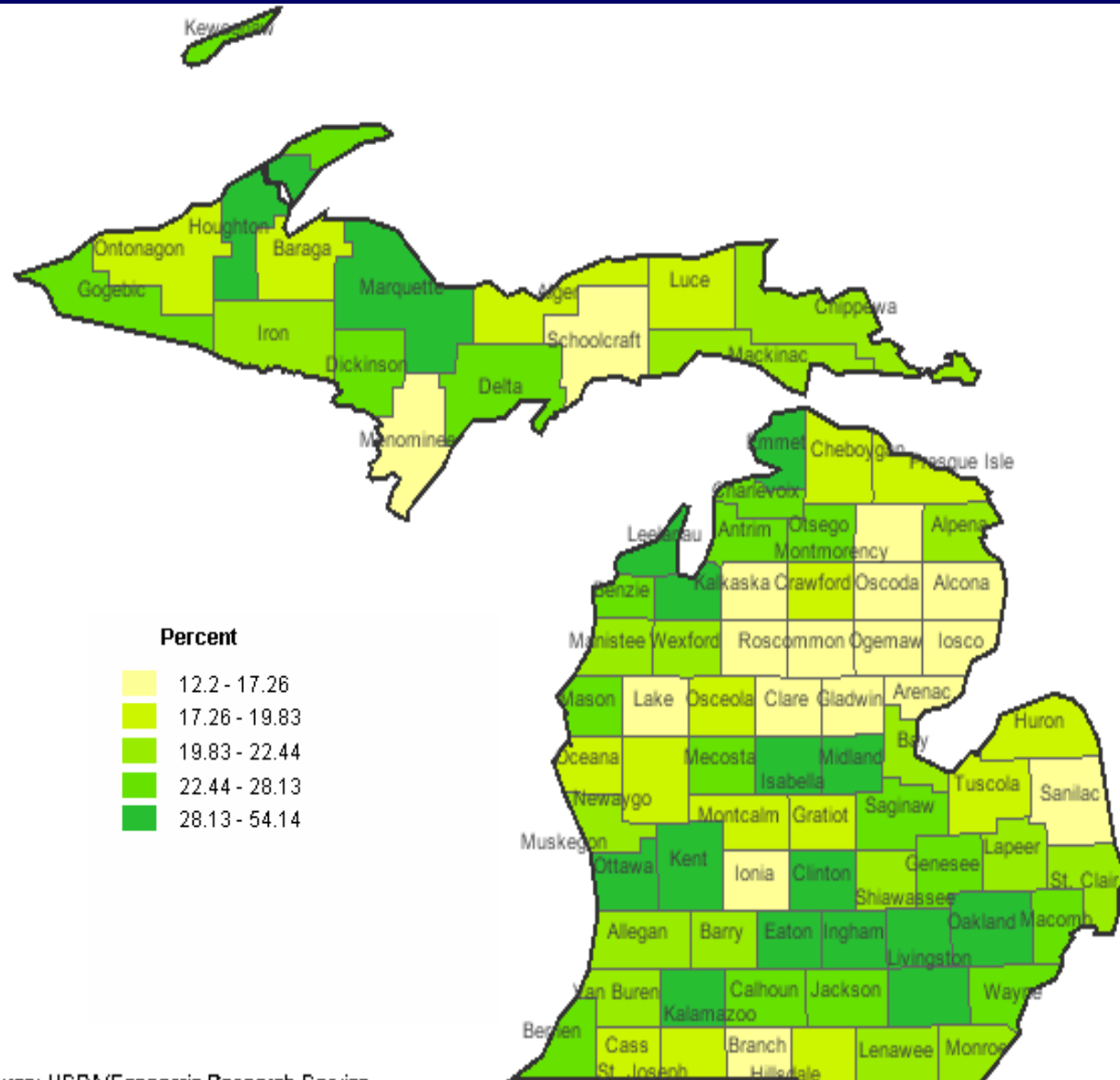
■ Unemployment Rate 2003 Service

ERS Map



Source: USDA/Economic Research Service

■ **Percent of Population 25 Years and Older Completing College 2000** *ERS Map* *Servi*



Source: USDA/Economic Research Service

Service



	4.41 - 15.32
	15.32 - 25.25
	25.25 - 35.43
	35.43 - 48.86
	48.86 - 65.58

Source: USDA/Economic Research Service

Population Growth

- From 1980 to 2000 Michigan's population grew at an rate of .3% per year.
- The annual rate of growth based only on years when the population was growing (1984 to 2000) was .6%.
- The annual rate of growth for the US during the same period of time (1984 to 2000) was 1.1%
- From 2005 to 2025, population growth in Michigan will slow to less than .2% annually.

Population Composition

- The white population will decline somewhat.
- Minority populations will grow. Hispanic and Asian populations will grow by almost 50%.
- Overall, the number of children will decline by 4.0%.
- The number of working adults will decline by 4.2%.
- The number of elderly in Michigan will increase by 50% in the next 20 years, from 1.25 million in 2005 to 1.87 million in 2025.

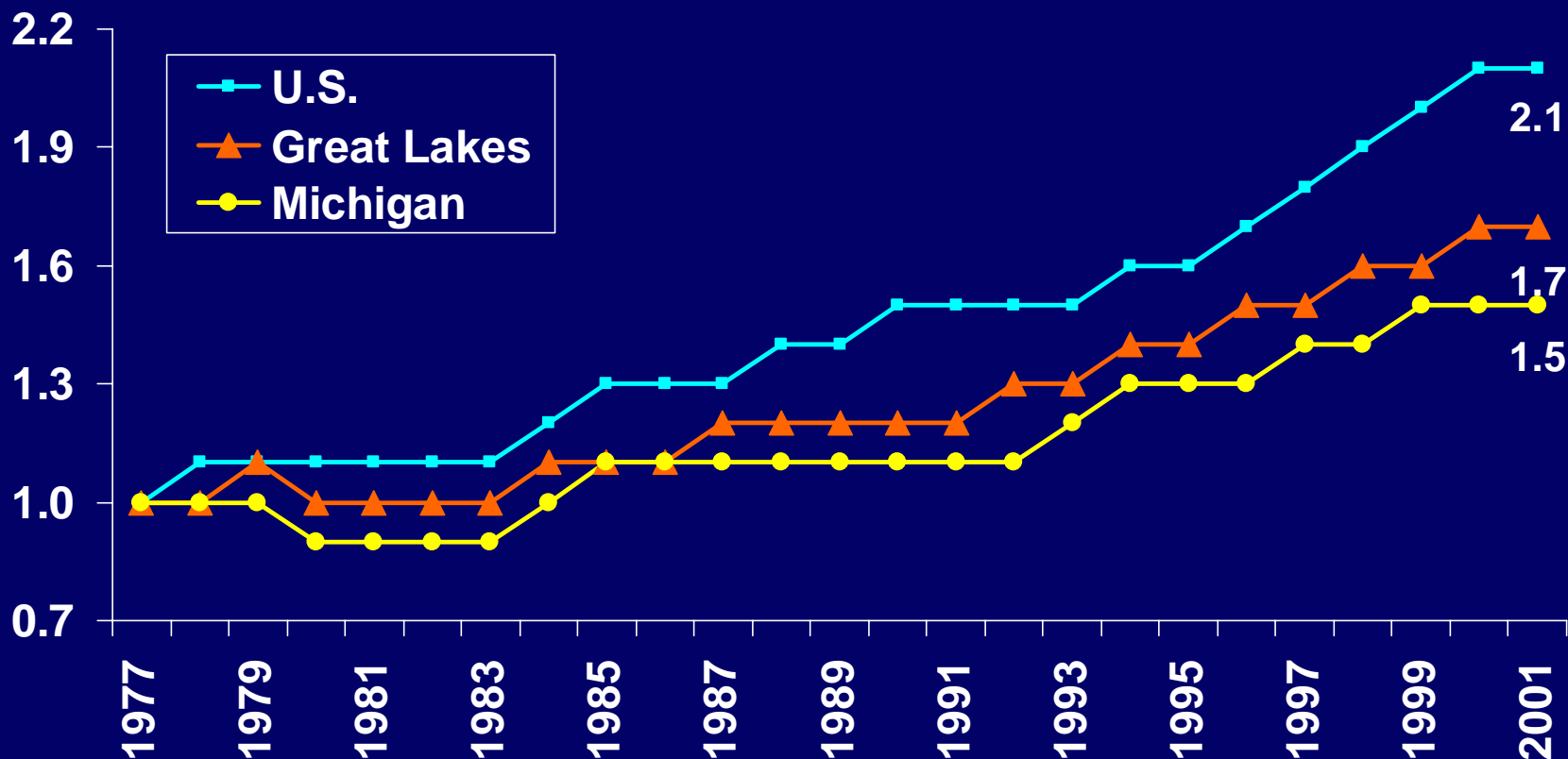
Michigan's Gross State Product Adjusted for Inflation (\$2001), 1977-2001



Source: Bureau of Economic Analysis at <http://www.bea.gov> - used BEA's chained (1996) dollars and recomputed values relative to base year 2001.

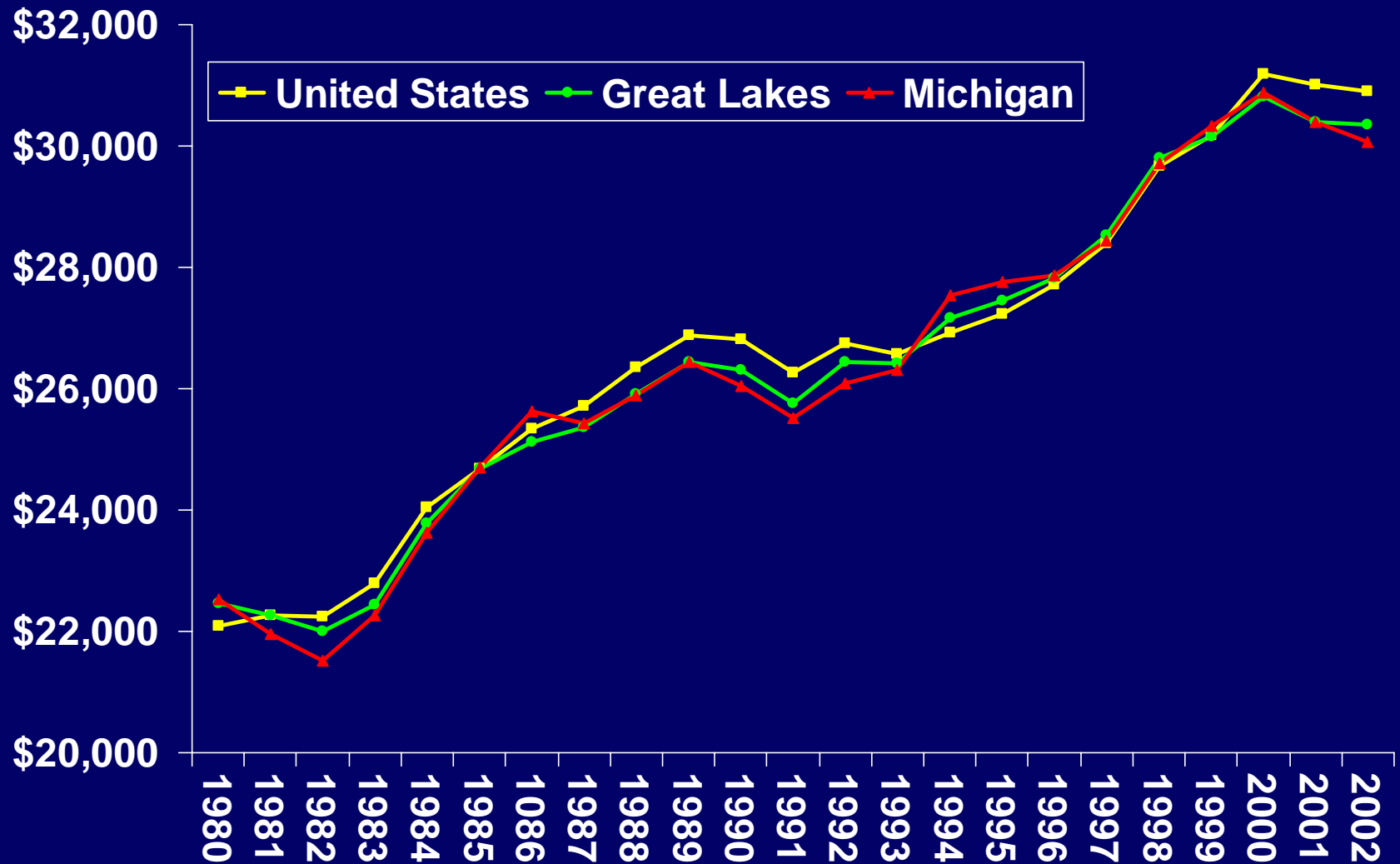


Change in Real Gross Domestic Product for the U.S., Great Lakes, and Michigan, Indexed: 1977=1



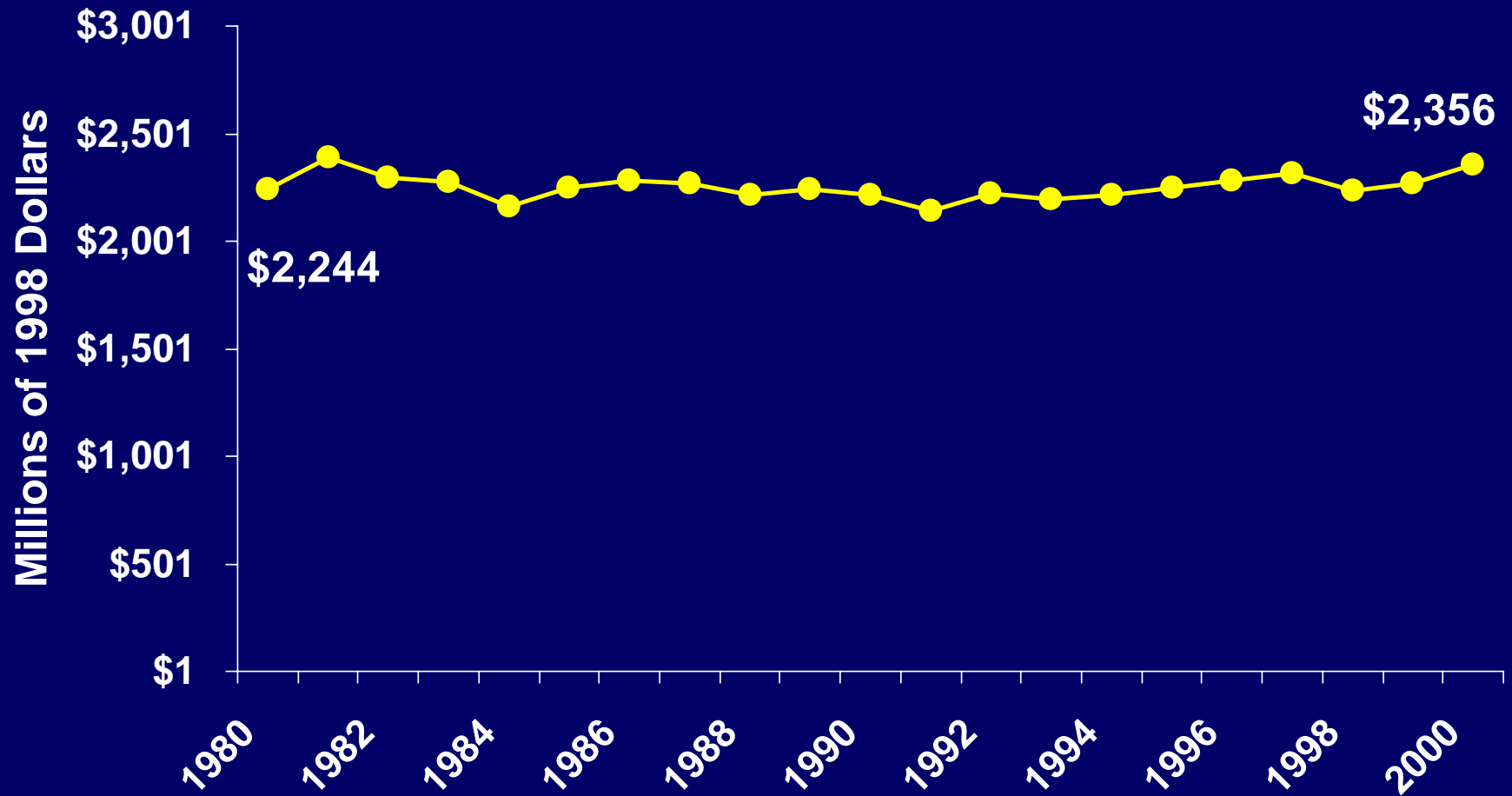
Source: Bureau of Economic Analysis at <http://www.bea.gov> - used BEA's chained (1996) dollars and recomputed values relative to base year 2001.

Real (\$2002) per Capita Personal Income, 1980-2002



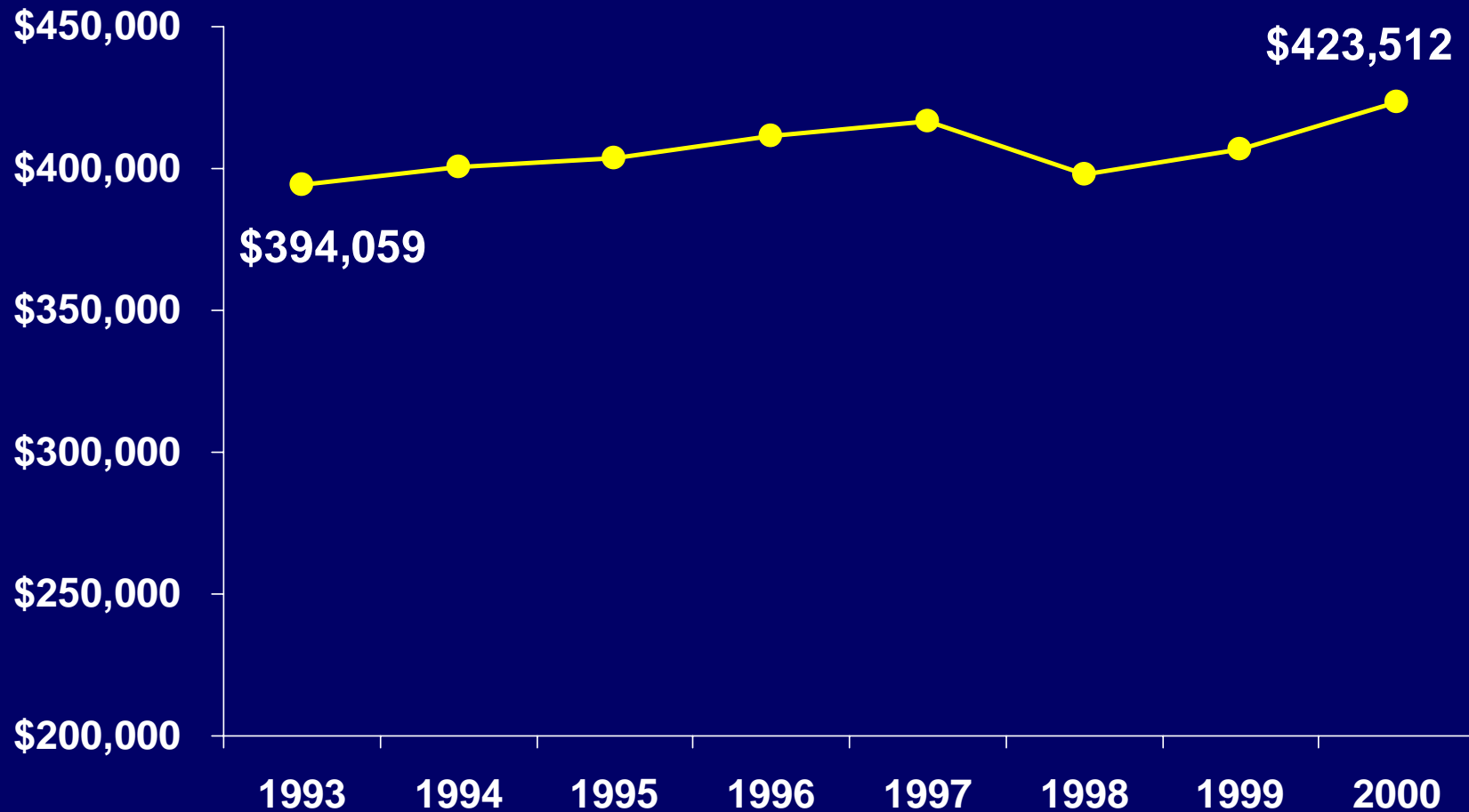
Source: Bureau of Economic Analysis Online at <http://www.bea.gov> (accessed on 5/12/2004), and the Bureau of Labor Statistics (BLS) for CPI data to adjust for inflation.

Michigan Dental Expenditures (\$2000) Adjusted for Inflation, 1980-2000

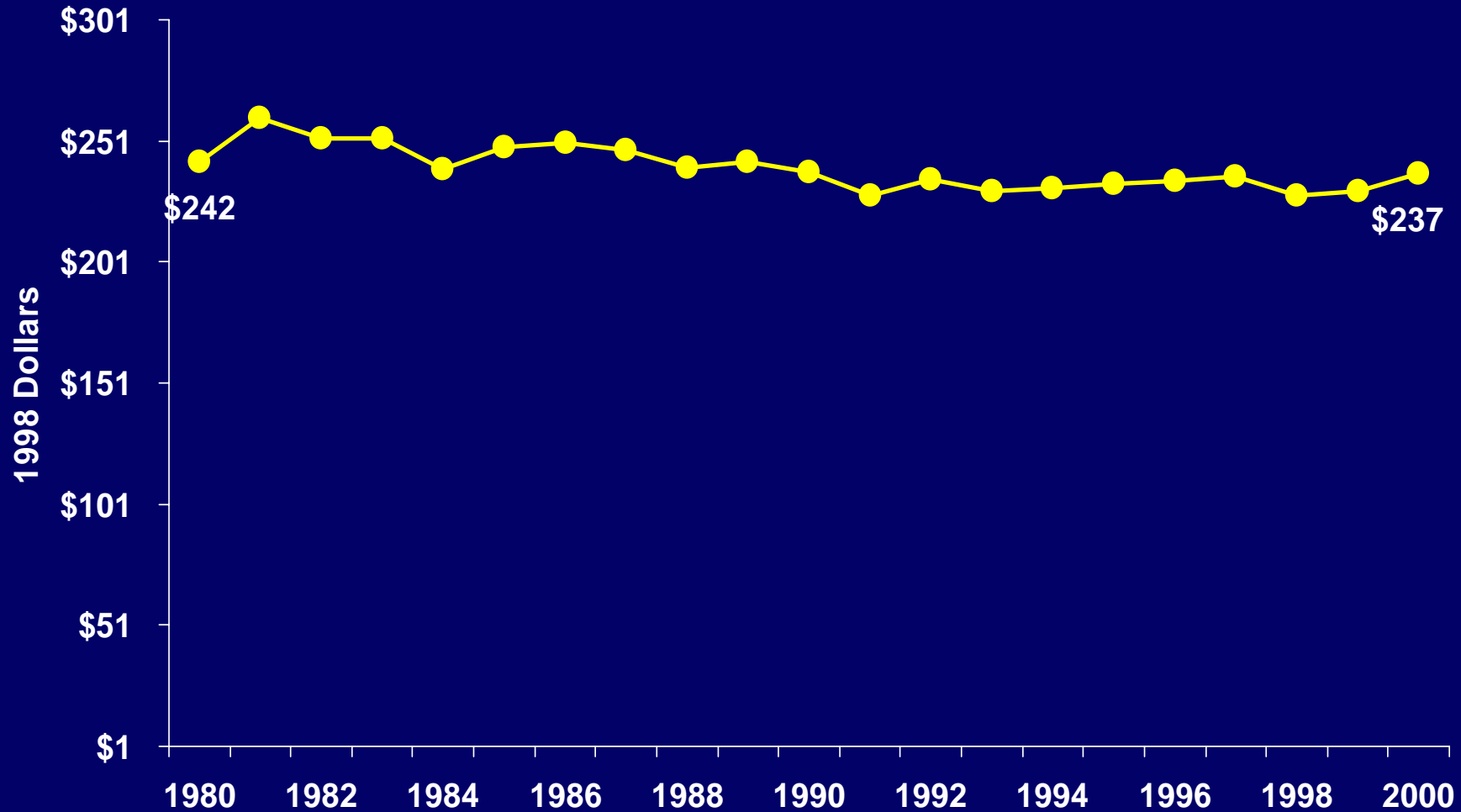


Michigan Dental Expenditures (\$2000) Adjusted for Inflation per Private Practice Dentist, 1993-2000

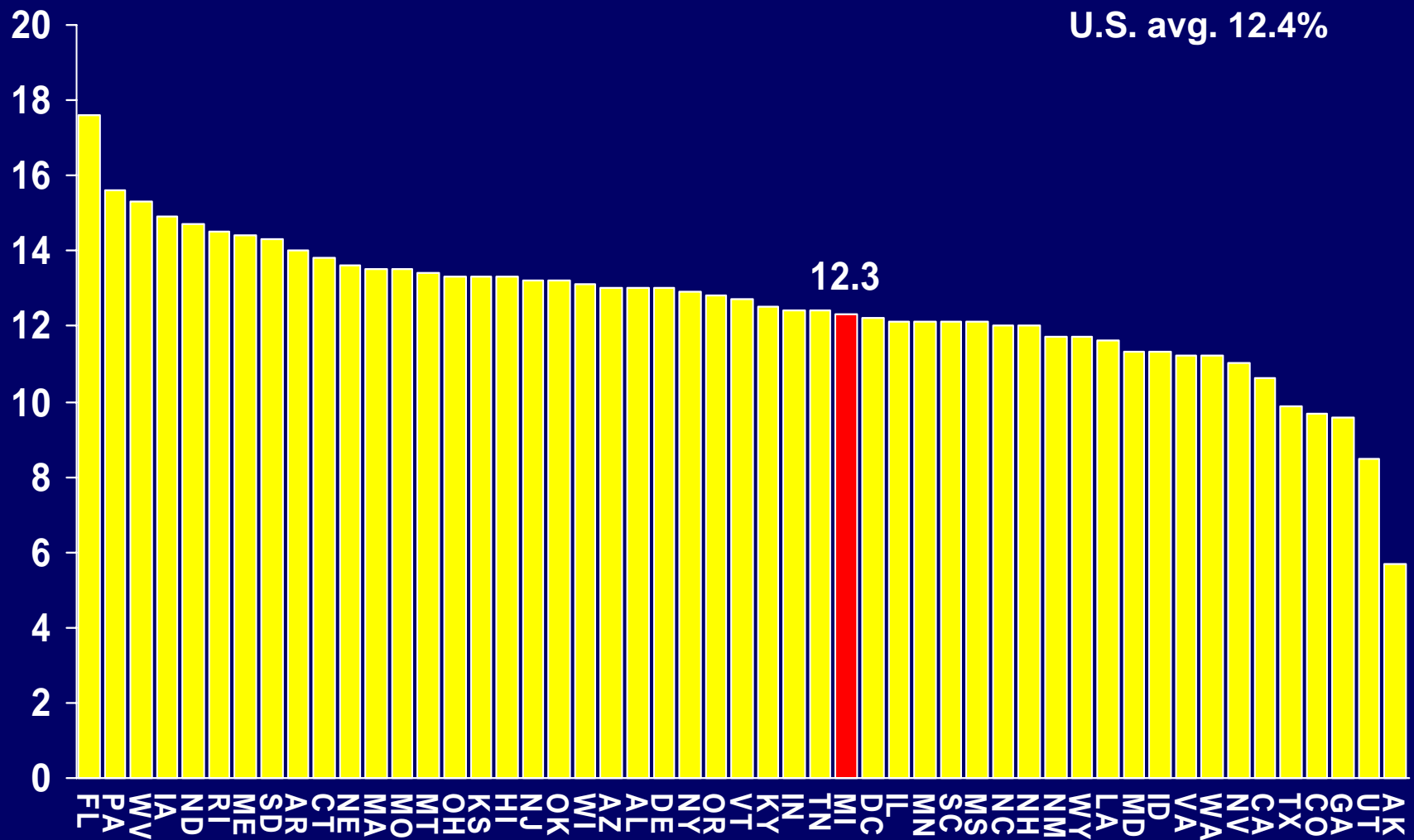
Dental Expenditures per DDS



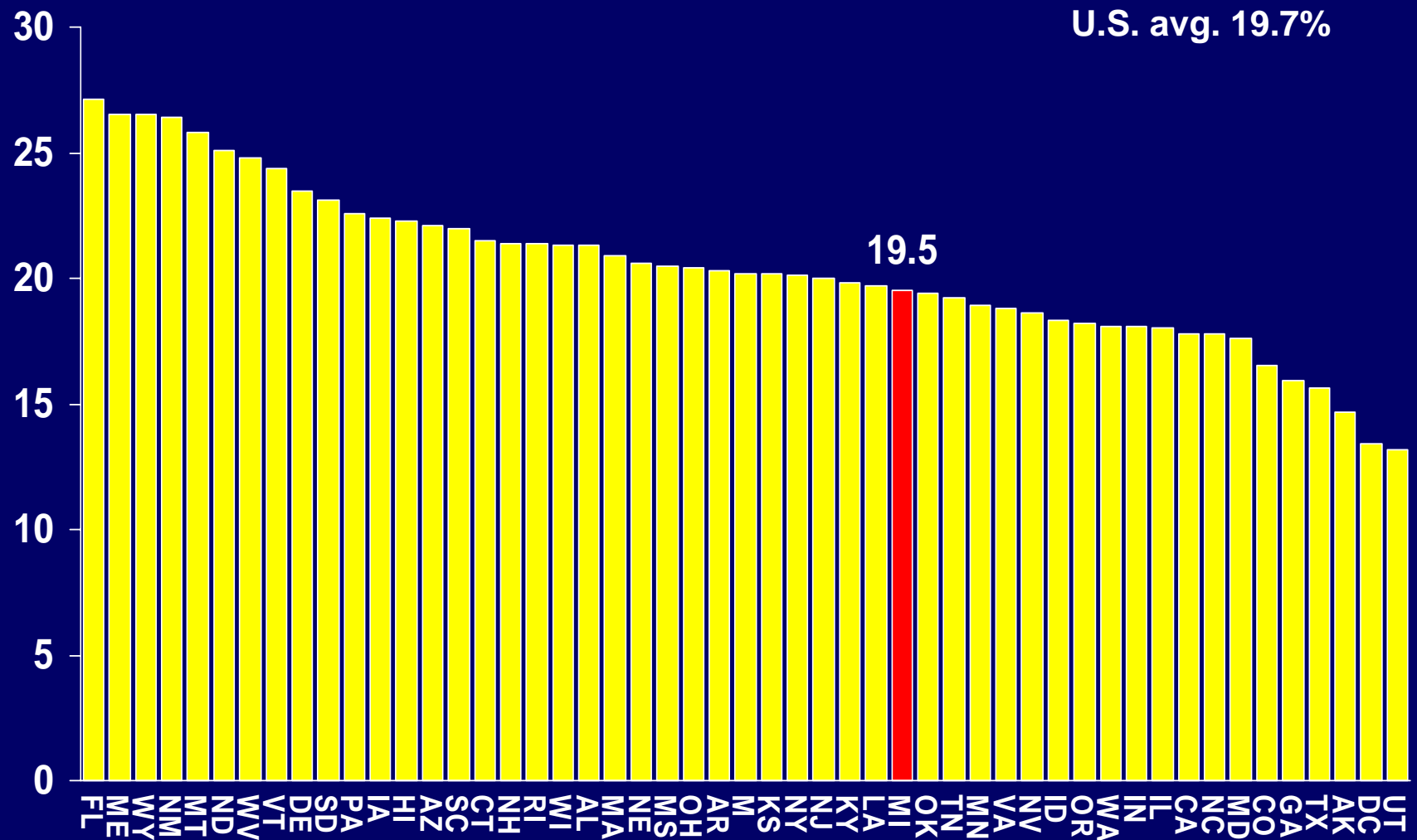
Michigan Per Capita Dental Expenditures (\$2000) Adjusted for Inflation, 1980-2000



Percent of population 65+, by State, 2000



Percent of population 65+, by State, 2030



Percent Edentulous 65+

- Estimates from 1999 Behavioral Risk Factor Surveillance System.
- State-based random digit dialed telephone survey of non-institutionalized U.S. civilian population 18 years old and older.
- Results are self-reported data.

Dental Profile Summary

- Although total real dental expenditures increased somewhat since 1980, per-capita expenditures were somewhat lower in 1998 than in 1980.
- This occurred in spite of an increase in Michigan GDP and a 33 percent increase in real per-capital income.
- Part of the explanation may be related to relatively high utilization of dental services in Michigan. There isn't as much room for growth.

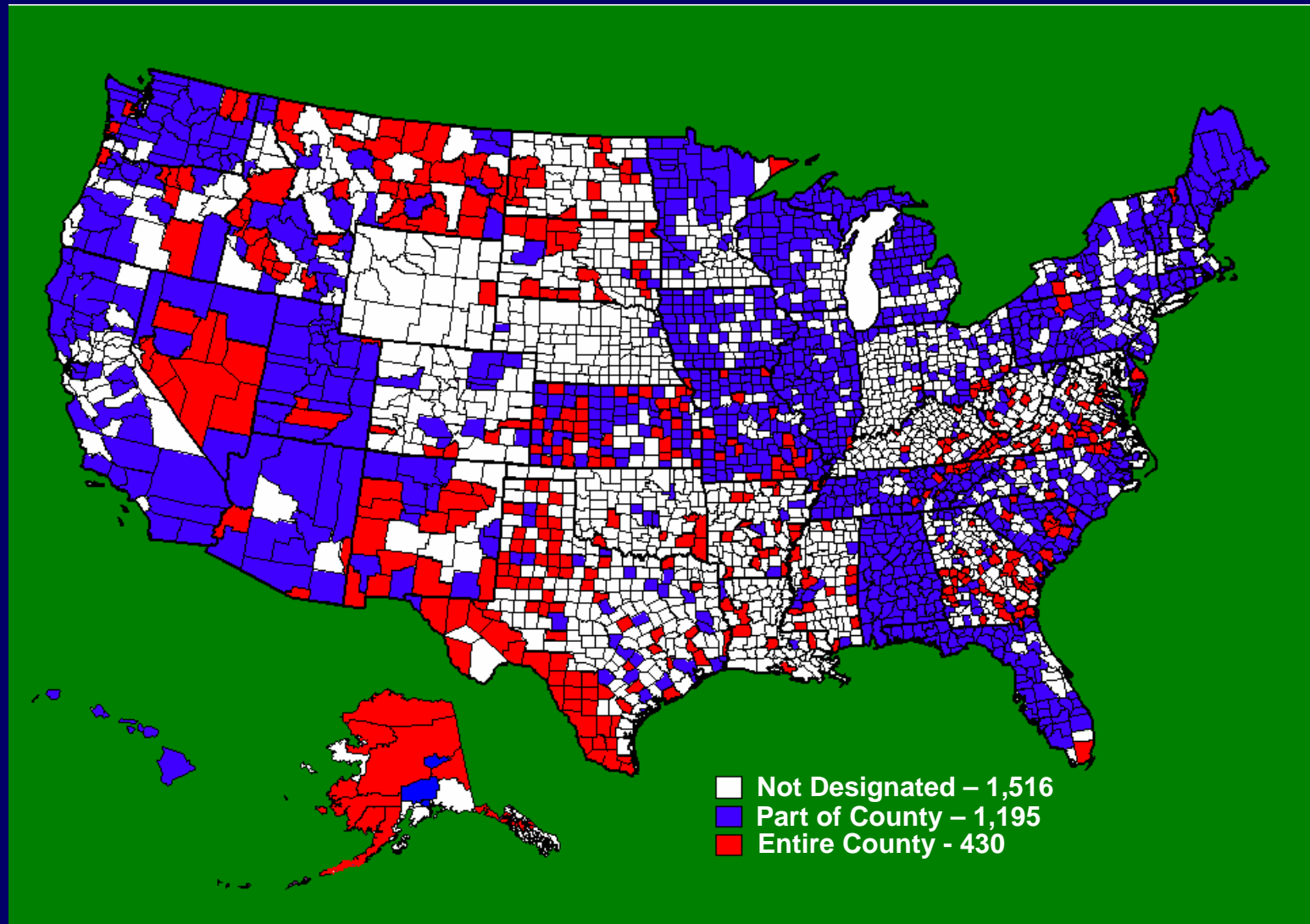
Dental Profile Summary

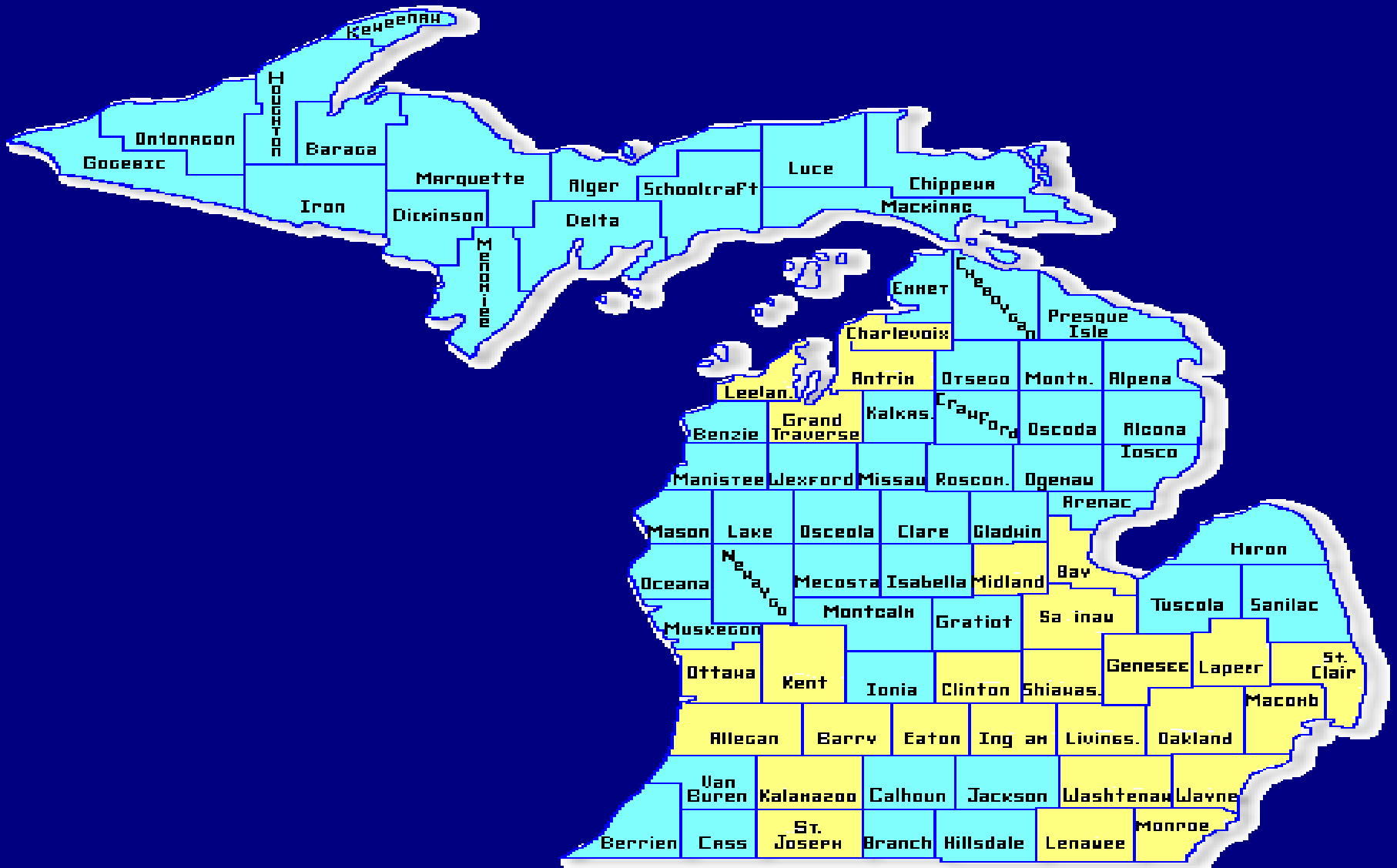
- Per capita dental expenditures for Michigan are close to the U.S. average.
- The percent of the population visiting a dentist in Michigan is about nine percentage points higher than the U.S. average for those 18 years old and older
- The percent with a visit was higher in Michigan for every demographic and economic subgroup examined.



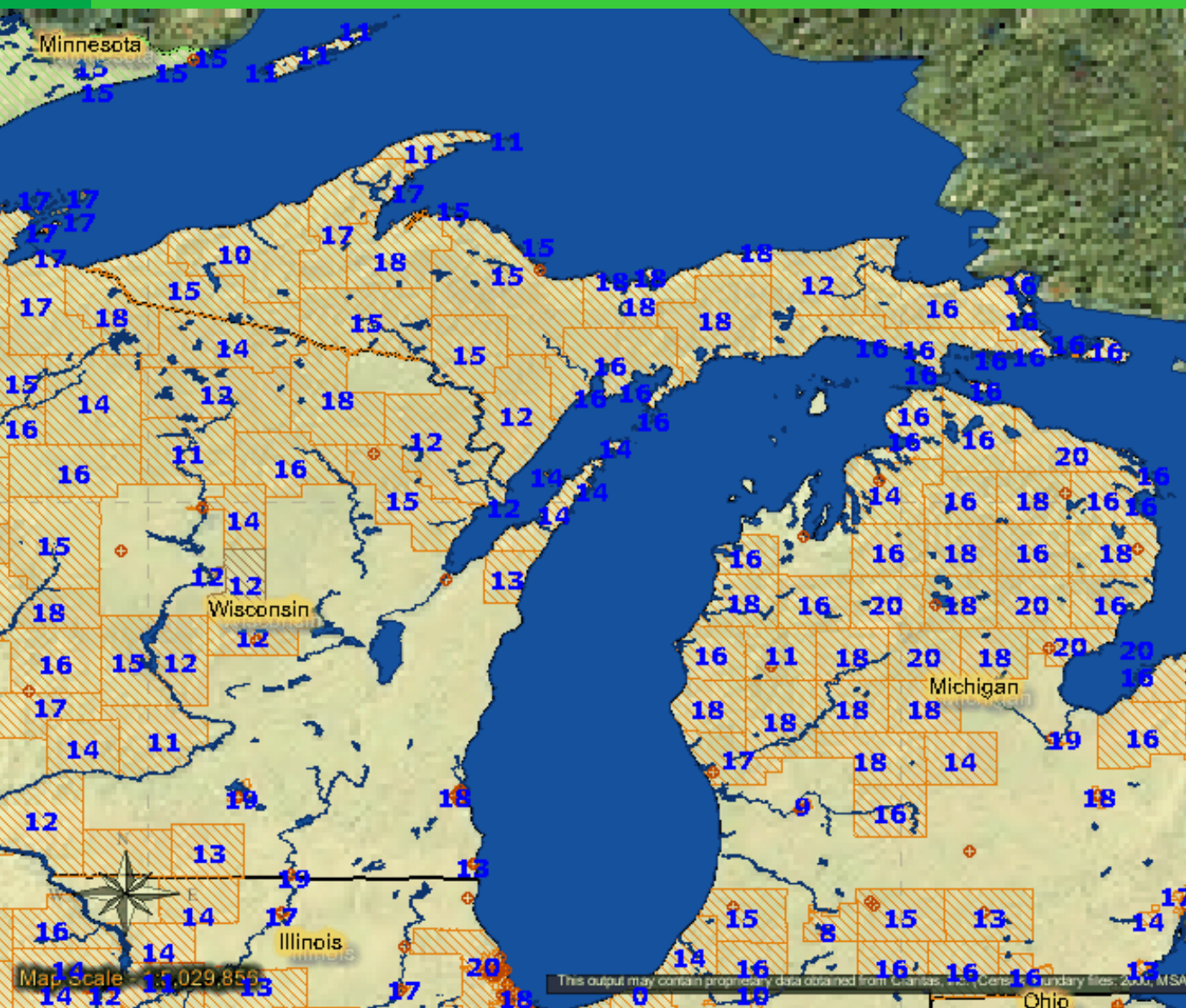
DENTAL HEALTH PROFESSIONAL SHORTAGE AREAS

Dental Health Professional Shortage Areas (DHPSAs), 2002





- **The HPSA Scores are developed for use by the National Health Service Corps (NHSC) in determining priorities for assignment of clinicians.**
- **Scores range from 1 to 25. The higher the score, the greater the priority.**



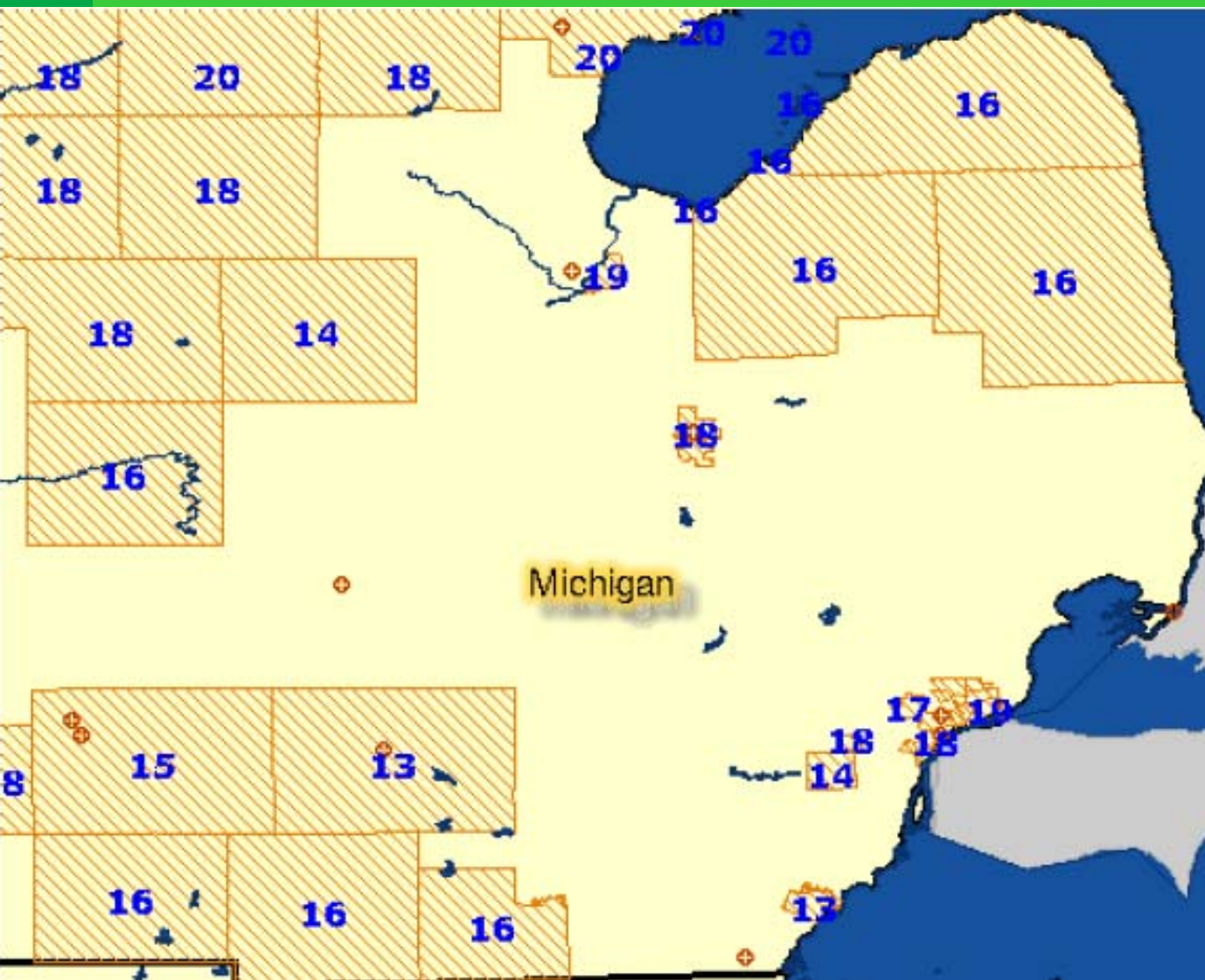
Legend

Health Professional Shortage Areas (Dental) - Point - Contiguous U.S.

- Comprehensive Health Center
- Federally Qualified Health Center Look A Like
- Indian Health Service Facility
- Rural Health Clinic
- Lakes, Reservoirs, Bays, and Major Rivers






Health Professional Shortage Areas (Dental) - Contiguous U.S.

- Geographical Area
- Population Group
- Single County
- States







Legend

Health Professional Shortage Areas (Dental) - Point - Contiguous U.S.

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Health Professional Shortage Areas (Dental) - Contiguous U.S.

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-  States



MDA Membership Projections

MDA membership category by age, 2005

	Active	Active Life	Grad Sdnt	Non-memb	Retire	Retire Life	Total	% Active
<35	408		27	127			563	72.6
35-39	403		3	147	2		558	72.6
40-44	551		1	177	7		741	74.9
45-49	726		1	254	9		1005	73.3
50-54	788		1	239	11		1057	75.8
55-59	680	1		203	16		915	75.6
60-64	403			150	58		626	66.0
65-69	103	163		140	16	84	524	20.4
70-74	20	115		126	3	181	474	4.5
75-79	1	56		93	1	206	406	0.3
80-84	0	22		72		191	341	0.0
Total	4,083	357	33	1,728	123	662	7,210	56.6

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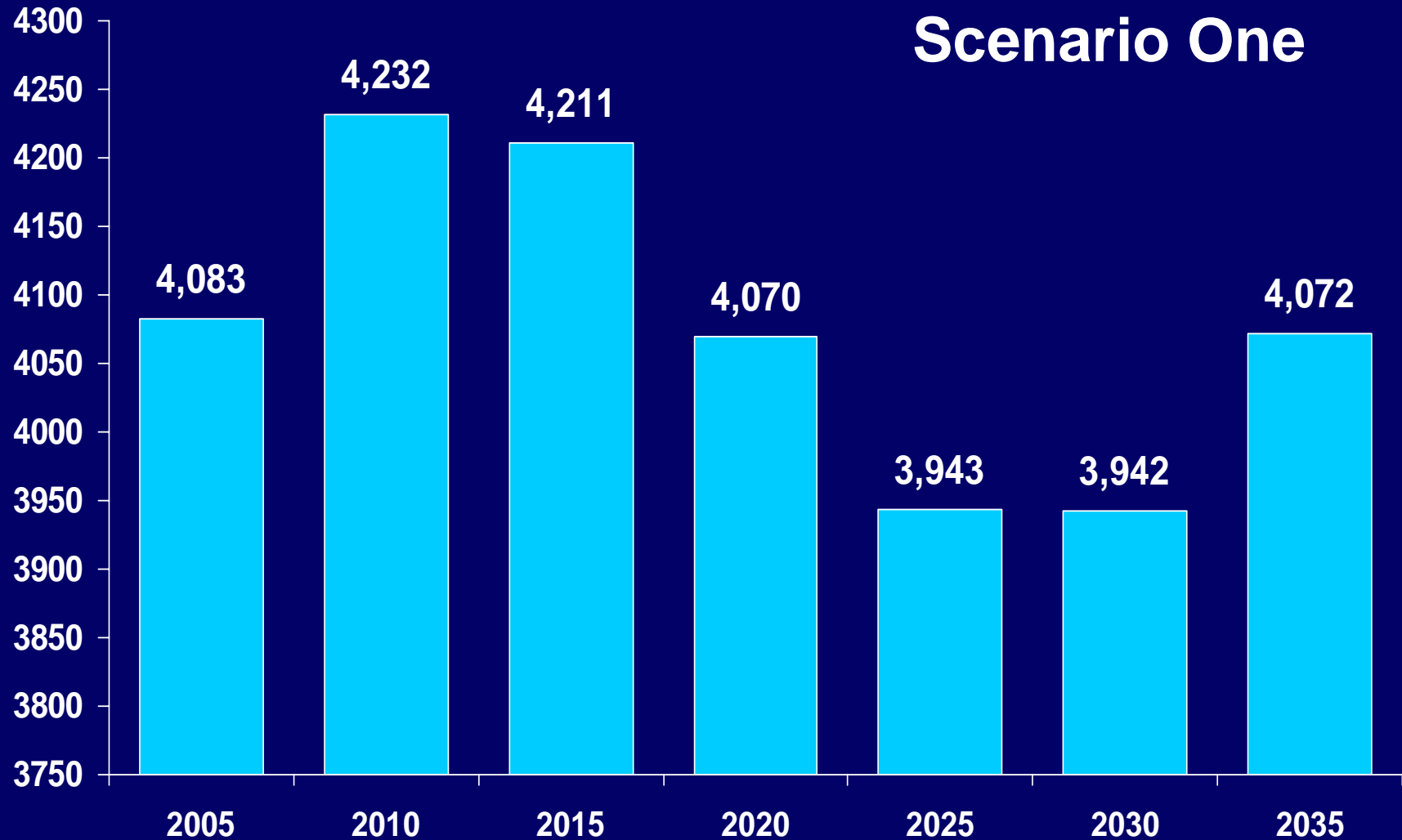
State of Origin, State of School & State of Practice - Annual Averages Based on Dentists who Graduated 1985-1995

State of Origin	State of School	State of Practice:	#	%
Michigan	MI	Michigan	99	82%
		Not Michigan	22	18%
	Not MI	Michigan	16	31%
		Not Michigan	35	69%
Not Michigan	MI	Michigan	12	43%
		Not Michigan	16	57%
	Not MI	Michigan	13	
		Not Michigan		

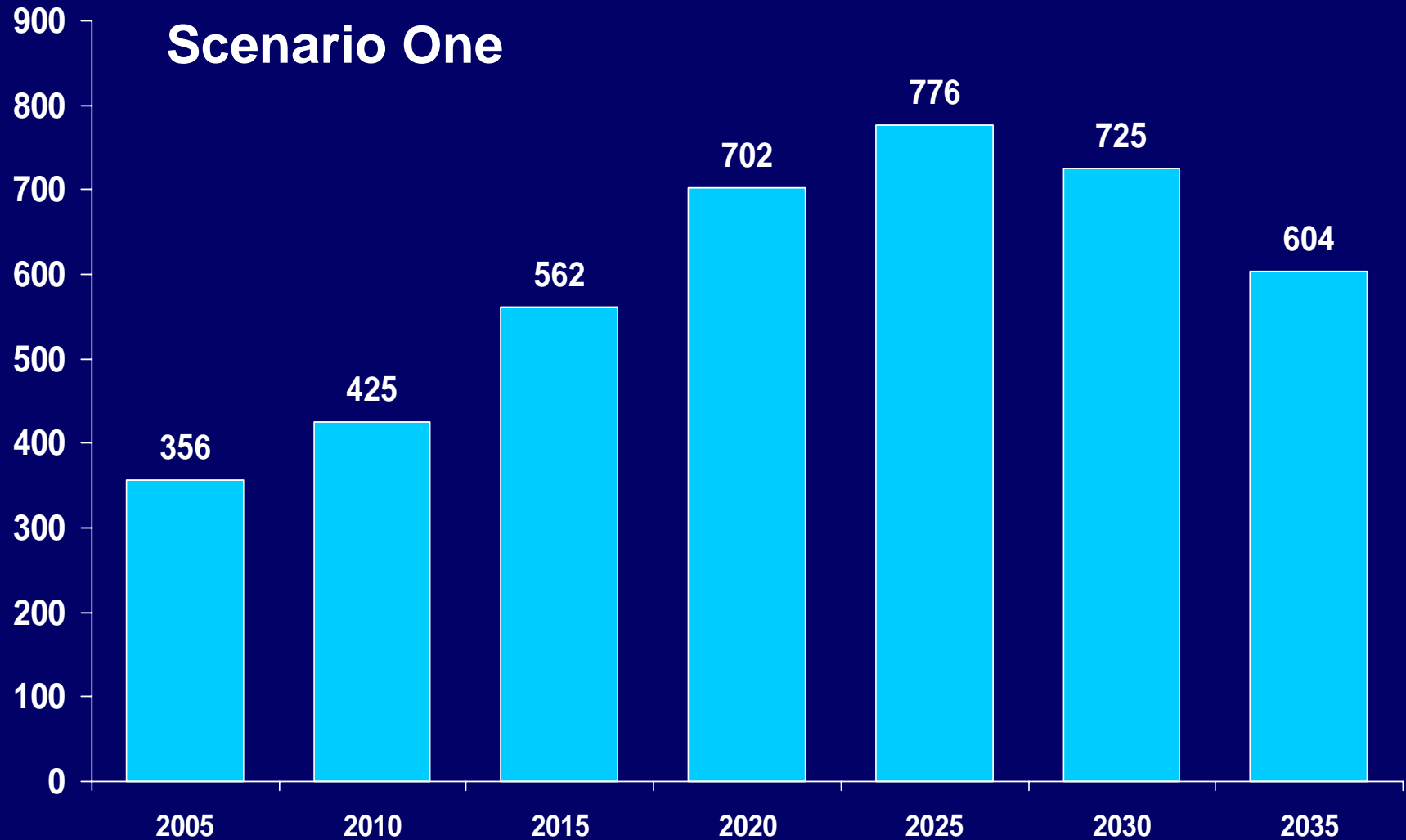
Two scenarios for projections of MDA active membership

- 74.5% of graduates from Michigan dental schools decide to practice in Michigan after graduation (Equal to the percentage in 1985-95).
- 90% of graduates from Michigan dental schools decide to practice in Michigan.
- Current enrollment levels persist.
- Same market share by 5-year age groups.
- 35 years to Active Life eligibility.

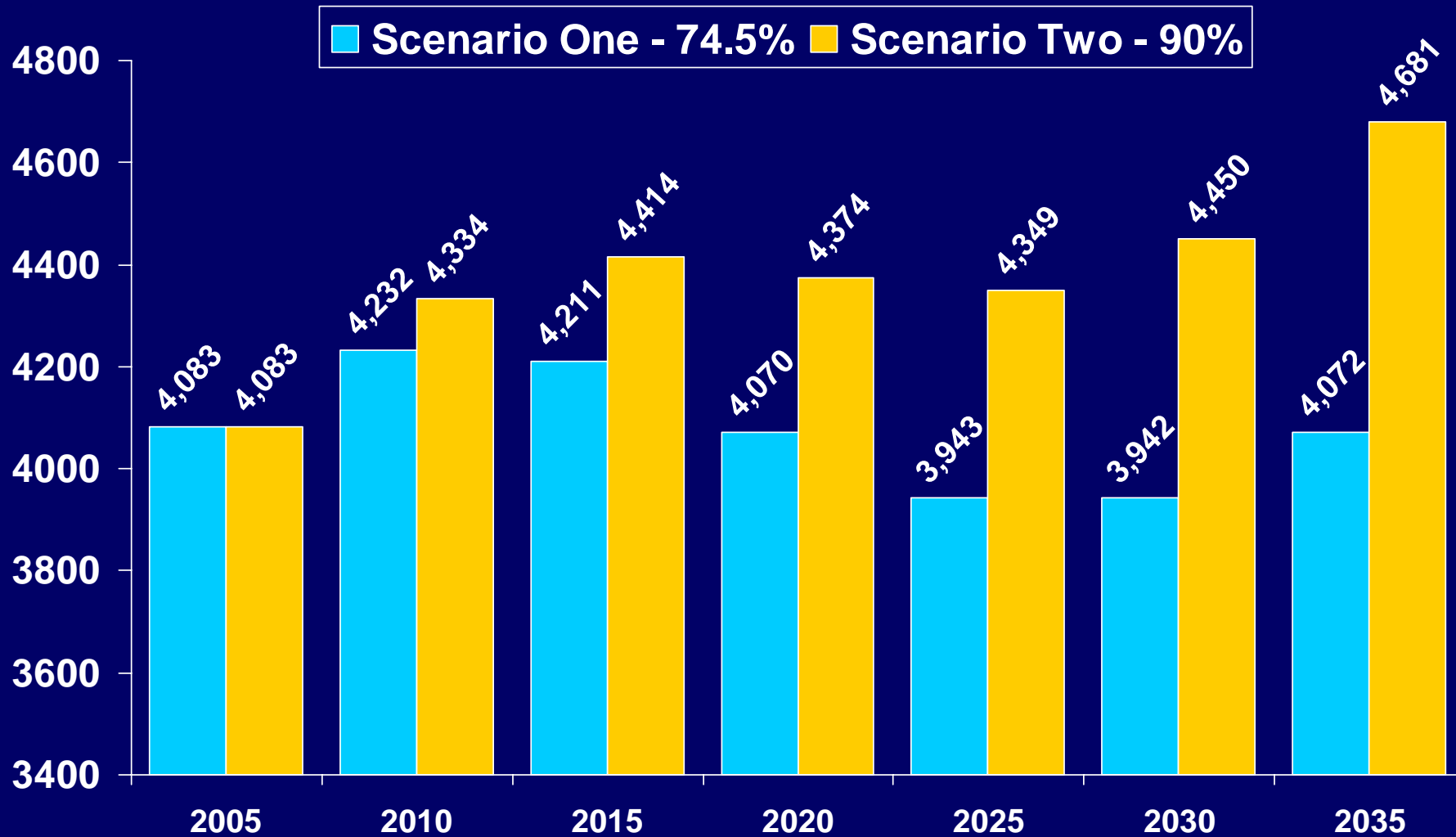
MDA Active Members, 2005 - 2035



MDA Active Life Members, 2005 - 2035



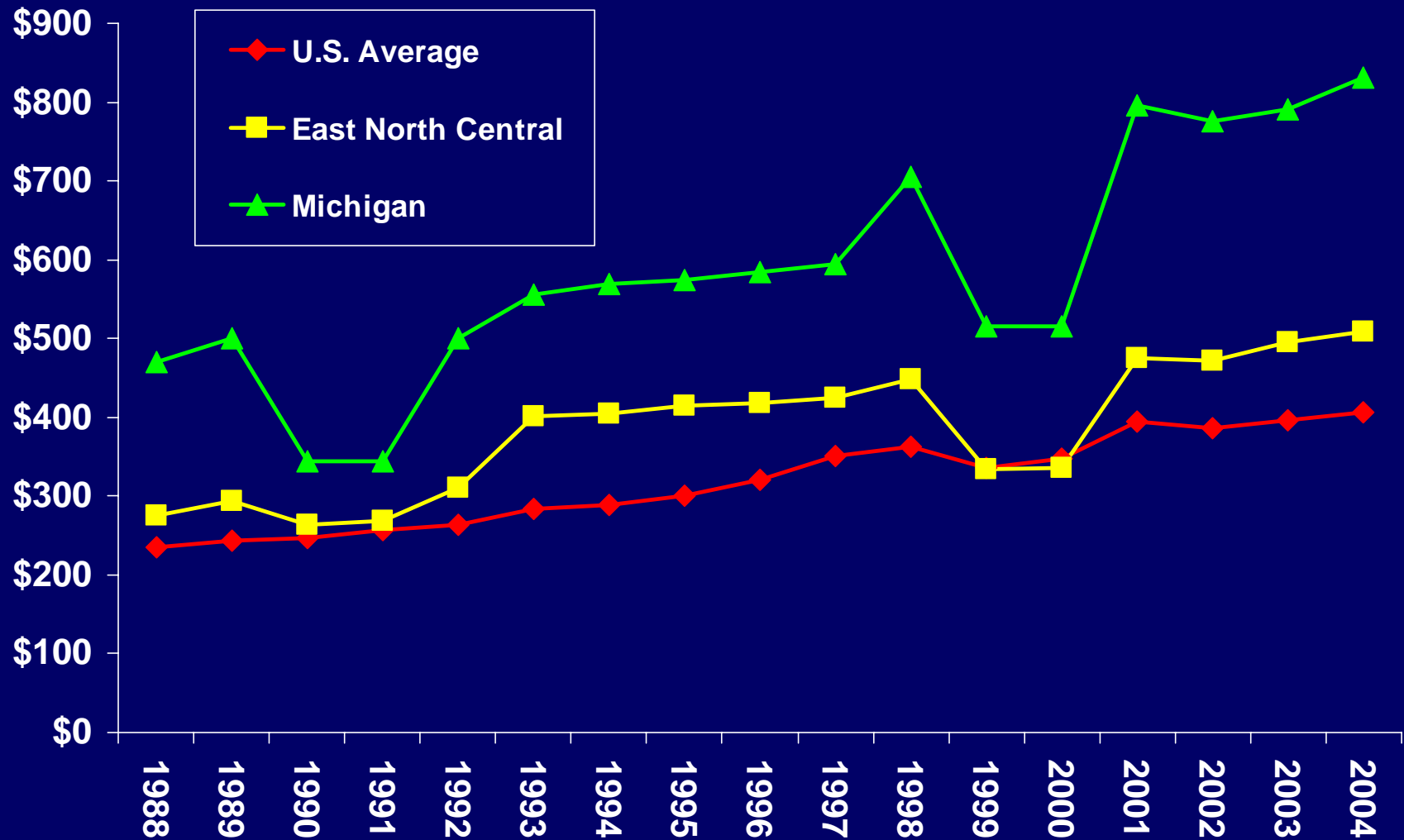
MDA Active Members, 2005 - 2035



Average annual change MDA active membership

INTERVAL	74.5%	90.0%
2005 to 2010	30	50
2010 to 2015	-4	16
2015 to 2020	-28	-8
2020 to 2025	-25	-5
2025 to 2030	0	20
2030 to 2035	26	46

U.S., Regional, and Michigan Constituent Society Dues, 1988-2004



Options for membership during baby-boom dentists' retirement

- Slightly increase market share slightly for dentists age 64 and younger.
- Slightly increase years for Active Life membership
- Increase non-dues revenue.
- Increase real dues.
- Increase in percent of graduates from Michigan dental schools who practice in Michigan.
- Increase enrollment in Michigan dental schools
- Attract more dentists from outside of Michigan

Summary and Conclusions

Summary - Demand

Population

- Will grow more slowly than the Nation.
- As baby-boomers reach 65, elderly will grow in numbers and as a percentage.
- Number of working age individuals will decrease in relation to old and young.
- Disadvantaged minorities will increase in number and as a percentage.

Summary - Demand

Economy

- The Michigan economy has been growing more slowly than the National economy.
- However, per capita personal income has been growing at about the same rate as the Nation,
- The slower aggregate economic growth is due to slow population growth.
- If this continues, demand for dental services could also grow more slowly.

Summary - Demand

Dental Utilization

- Is higher in Michigan than in the Nation for all age and socioeconomic groups.
- This indicates that people in Michigan know and value dental services.
- This provides a base from which to grow the demand for dental expenditures.
- Like the rest of the country, utilization and expenditures is strongly related to education and income levels.

Summary - Demand

Dental Expenditures

- Total real spending for dental services has been level.
- Per capita real dental spending has actually declined slightly since 1990.
- Real gross billings per dentist has increased slightly, indicating that in the past the increase in demand has slightly exceeded in increase in supply

Critical Demand-side Issues

- During the next 20 years, will the elderly continue to demand services as the baby-boomers retire.
 - How many will keep their dental insurance coverage.
 - The baby-boomers will have teeth and a record of high utilization.
 - As they move into their 70s and 80s, will they continue to need and demand dental services.
- Disadvantaged populations will increase.
 - What will their utilization be?
 - Will there be additional public spending for dental services?
- Will oral health in Michigan continue to improve

Summary - Supply

Number of Dentists

- Dentists in private practice will increase during the next 20 years but the growth rate will be slow.
- Population to dentist ratio will decline slightly.
- The productive capacity of the dental delivery system will increase during the next 20 years due to improved productivity.

Critical Supply-side Issue

- Will the increase in productive capacity be too small or too great?
 - That depends on what happens to demand
 - Demand growth in Michigan may be slower than for the entire Nation.
 - If demand is sluggish and the supply of practicing dentists increases rapidly, the gross incomes of dentists could be adversely affected.
 - This will make it more difficult to attract dentists to practice in Michigan

Critical Supply-side Issue

MDA Membership

- The same baby-boom generation that is going to swell the ranks of the elderly is also going to produce substantial numbers of dentists that will reach the 35-year threshold for active life membership.
- This is going to place downward pressure on the number of active members of the MDS, given the current annual inflow of dentists and the current market share.

Critical Supply-side Issues

MDA Membership

- This could create a tension between membership goals and the supply of dentists needed to meet the demand for dental services.
- Organized dentistry in Michigan will need
 - **To follow the inflow and outflows of dentists carefully.**
 - **Evaluate the trade-offs between the two objectives carefully and frequently**